



GT

5-Channel Amplifier Owners Manual

GT-5750

Introduction

Thank you for choosing Boston Acoustics® and congratulations on your purchase of the Boston GT® Amplifier. If you own other Boston products, the outstanding audio performance and ease-of-use of the GT Amplifier should come as no surprise. If you're new to Boston, welcome – you've made a great choice.

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Parts List

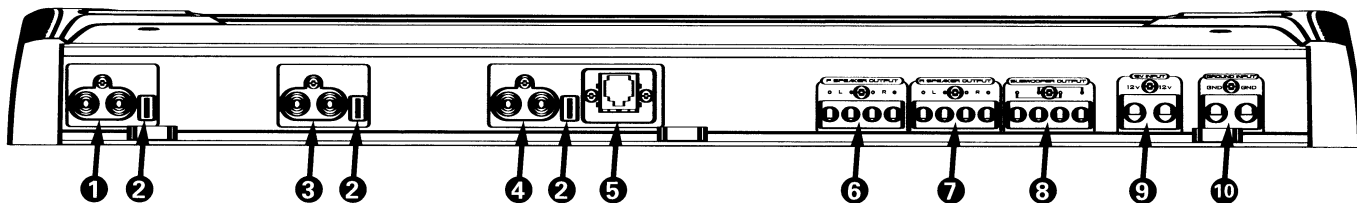
Included Hardware:	GT-5750
Installation Manual	1
Female Quick-Connect Terminal (for remote turn-on input)	1
2mm Hex Wrench	1
3mm Hex Wrench	1
Mounting Screws	6

Specifications

Technical Specifications:	GT-5750
Front and Rear Channels Rated Power (CEA-2006-A):	
@ 4-Ohm:	70 Watts x 4
@ 2-Ohm:	100 Watts x 4
Subwoofer Channel Rated Power (CEA-2006-A):	
@ 4-Ohm:	250 Watts x 1
@ 2-Ohm:	375 Watts x 1
Front and Rear Channels Rated Power (12v):	
@ 4-Ohm:	50 Watts x 4
Subwoofer Channel Rated Power (12v):	
@ 2-Ohm:	275 Watts x 1
Frequency Response (-3dB):	10Hz-95kHz
Signal-to-Noise Ratio (A Weighted):	>100dB
THD+N:	0.03
Highpass Crossover (Front and Rear Channels):	
Frequency Range:	20Hz - 350Hz
Slope (dB Per Octave):	12dB
Lowpass Crossover (Subwoofer Channel):	
Frequency Range:	50Hz - 350Hz
Slope (dB Per Octave):	12dB
Signal Voltage Input Range:	200mv - 8v
Fuse Amp Rating:	100 Amp
Dimensions:	
Width:	22 ¼" (566mm)
Height:	2 ¾" (61mm)
Depth:	9" (229mm)

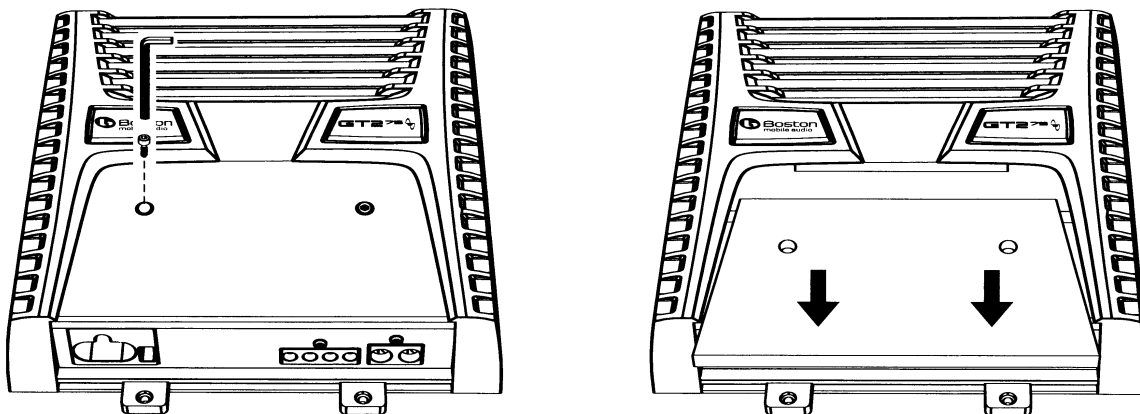
Connections

GT-5750



- ❶ Front Channel RCA Input
- ❷ Remote Turn-On (female spade connector supplied)
- ❸ Rear Channel RCA Input
- ❹ Subwoofer Channel RCA Input
- ❺ Remote Gain Port (refer to GT-RSL manual for installation instruction)
- ❻ Front Left & Right Speaker Outputs (12-gauge accepted)
- ❼ Rear Left & Right Speaker Outputs (12-gauge accepted)
- ❽ Subwoofer Mono Speaker Outputs (12-gauge accepted)
- ❾ 12v Power Input (4-gauge accepted)
- ❿ Ground Wire Inputs (4-gauge accepted)

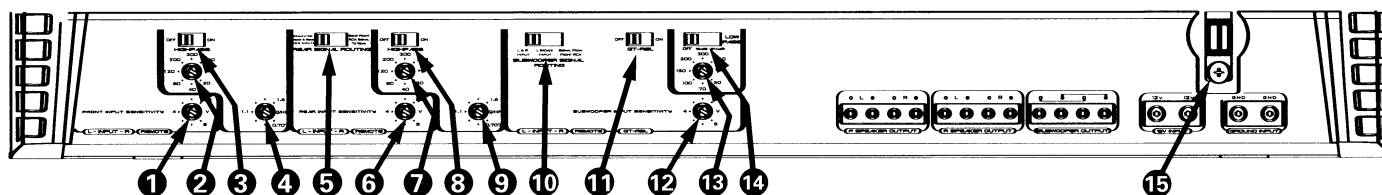
Top Panel Removal / Installation



The cover panel is secured with two (2) 3mm screws. Once unscrewed, pull panel forward, once clear of the corners of the end panels, it will lift off. Reverse to reinstall.

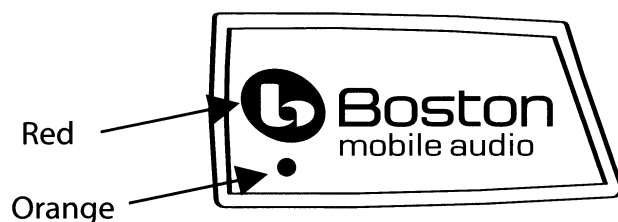
Controls

GT-5750



- ❶ Front Channel Input Sensitivity (250mv to 8.0v - continuously variable)
- ❷ Front Channel Highpass Frequency Adjustment (20Hz to 350Hz - variable)
- ❸ Front Channel Highpass Crossover OFF/ON Switch
- ❹ Front Channel Highpass Crossover Q-Tune™ Adj. (0.707 to 1.6 - variable)
- ❺ Rear Signal Routing Switch (Sends Front RCA Signal to Rear Channels)
- ❻ Rear Channel Input Sensitivity (250mv to 8.0v - continuously variable)
- ❼ Rear Channel Highpass Frequency Adjustment (20Hz to 350Hz - variable)
- ❽ Rear Channel Highpass Crossover OFF/ON Switch
- ❾ Rear Channel Highpass Crossover Q-Tune™ Adj. (0.707 to 1.6 - variable)
- ❿ Subwoofer Signal Routing Switch (Sends RCA Signal to Subwoofer)
- ⓫ Rear Channel Remote Gain OFF / ON Switch (ON when using GT-RSL)
- ⓬ Subwoofer Channel Input Sensitivity (250mv to 8.0v - continuously variable)
- ⓭ Subwoofer Channel Lowpass Frequency Adjustment (20Hz to 350Hz - variable)
- ⓮ Subwoofer Channel Lowpass Crossover OFF/ON Switch (OFF/12dB/24dB)
- ⓯ Fuse (replace with 100amp mini ANL only)

Status LEDs



The Boston Logo will illuminate "Red" under normal operating conditions.

The Orange LED (not visible unless lit) will illuminate during start-up and under fault conditions. If this is illuminated after start-up, please refer to troubleshooting on page 12.

Installation - General

WARNING! Before driving the amplifier mounting screws through any surface, be sure of what is behind that surface. Check for the gas tank, brake lines, and any vehicle wiring harness. Never run wires outside or under the vehicle or where they could become broken or interfere with the safe operation of the vehicle.

Before You Install

Before you install the unit, disconnect the negative (–) battery cable in the engine compartment of the vehicle. Doing so will prevent damage to both the electrical system of the vehicle and the amplifier during installation.

Battery and Charging System

In order for the amplifier to function correctly, the electrical system of the vehicle should be professionally checked for overall electrical capacity. When used, the amplifier will increase the demand on the battery and alternator. Therefore, both should be thoroughly evaluated before installing the amplifier to ensure they are in normal operating condition and able to handle the increased demand the amplifier will present to the vehicle's electrical system.

Wire Routing

Do not run the power wire near any low-level signals or audio cables such as the RCAs from the head unit. Noise can be introduced into the amplifier when this occurs. It is helpful to diagram the wire layout first before any installation is initiated.

Choose the Mounting Location

Plan your installation so that the amplifier is mounted where adequate ventilation is available. *Never mount an amplifier in the engine compartment of a vehicle!*

WARNING! Before driving the mounting screws through any surface, be sure of what lies behind that surface. Check for gas tank, brake lines, and any vehicle wiring harness.

Passenger and Trunk Compartment Mounting

If the amplifier is mounted under a seat, be sure that the vents do not become blocked. Do not allow seat padding or other obstructive material to press down on the amplifier.

All Boston GT® amplifiers have top panel controls. If the amplifier is mounted under a seat, position the amplifier so the cover panel can be removed with the seat forward or back to allow adjustment of the audio settings.

When mounting in a trunk, choose a location that will be protected from sliding cargo or other materials. Mount the amplifier to solid surfaces only. Do not mount to plastic trim panels. Do not mount the amplifier with Velcro, double-stick tape, or by wedging into position. Amplifier should be mounted using the movable mounting feet and the provided mounting screws.

Multi-Position Mounting Feet

The mounting feet are designed to slide in both directions to clear installation obstructions on the mounting surface.

Venting (Side and Rear)

The cooling vents must be kept clear of obstructions once the amplifier is installed. If the vents are obstructed, this could lead to premature thermal shutdown or amplifier failure.

Installation - Wiring

Amplifier Fuses

Although the amplifier has an internal fuse, additional fuse protection should be installed as close as possible to the battery on the positive (+) power wire going to the amplifier. An inline fuse should be installed at no more than 18" (46cm) on the positive (+) power wire. The rating of the inline fuse should equal the value of the internal fuse of the amplifier if only the single amplifier is connected to this wire. If other devices are connected to this wire, the fuse value should be of sufficient capacity to handle the demand.

Wire Gauge

The amplifier accepts up to 4-gauge stripped wire at the DC power and ground input terminals, and 4-gauge is recommended. Wire runs should be kept to the minimum practical length.

Power 12v and Ground (GND) Connection

Strip approximately $\frac{5}{8}$ " (16mm) of insulation. The positive (+) power wire is installed into the amplifier terminal marked "12v". The negative (-) wire is installed into the terminal marked "GND". The ground wire should be as short as possible and connected directly to the chassis of the vehicle. Make sure that the chassis connection point is free of rust, grease, dirt, paint, and other materials that may insulate the ground wire from making proper connection. Tighten the 12v and GND terminals with the supplied 3mm hex wrench to secure the wire into the terminals. If the power wire must be routed through a drilled or existing hole, use a nylon panel grommet to prevent the insulation from fraying. Failure to do so could lead to an electrical short if the wire insulation is worn through and the power wire is shorted to ground.

Remote Input Connection

Use the supplied FEMALE quick-connect terminal to connect the REMOTE trigger lead from the head unit to the amplifier. Crimp connector to wire from head unit that controls remote turn-on (refer to head unit owner's manual). Once the quick-connect terminal is crimped into place, carefully push connector onto recessed MALE REMOTE terminal adjacent to the RCA input pair (refer to the diagram on page 4).

Speaker Output Connection

Prepare each wire by stripping approximately $\frac{5}{8}$ " (16mm) of insulation. The positive (+) speaker wires are installed into the amplifier terminals marked "SPEAKER OUTPUT" / "+" (refer to the diagram on page 4). The negative (-) speaker wires are installed into the amplifier terminals marked "SPEAKER OUTPUT" / "-". Tighten the "SPEAKER OUTPUT", "+", and "-" terminals with the supplied 2mm hex wrench to secure the wires into the terminals. If the speaker wires must be routed through a drilled or existing hole, use a nylon panel grommet to prevent fraying the wire insulation. Failure to do so could lead to an electrical short if the wire insulation is worn through and the speaker wires are shorted to ground.

Mono Subwoofer Operation

Refer to the diagram on page 4.

WARNING! Subwoofer impedance must not fall below 2 ohms when in MONO mode.

Tuning The Amplifier - Front and Rear Speakers

1) Music

The material chosen for system tuning must be both clear in recording quality and dynamic in amplitude. Many audiophile "test" discs have musical tracks with both of these characteristics and should be used.

2) Front, Rear, and Subwoofer Input Sensitivity Controls

Turn controls all the way counterclockwise (minimum position). In this position, the amplifier will be less sensitive to the input signal from the head unit (refer to the diagram on page 5).

3) Front, Rear, and Subwoofer Crossover Controls

Crossovers should be turned "OFF" during this phase of setup. Move the HIGHPASS and LOWPASS switches to the "OFF" position (refer to the diagram on page 5), with these settings, full-range signal is sent to the speaker outputs.

4) Rear Signal Routing

If using separate RCAs for Front and Rear move switch to "Dedicated Front and Rear RCA Inputs". When using a single RCA for both Front and Rear Channels, move the switch to "Send Front RCA Signal to Rear".

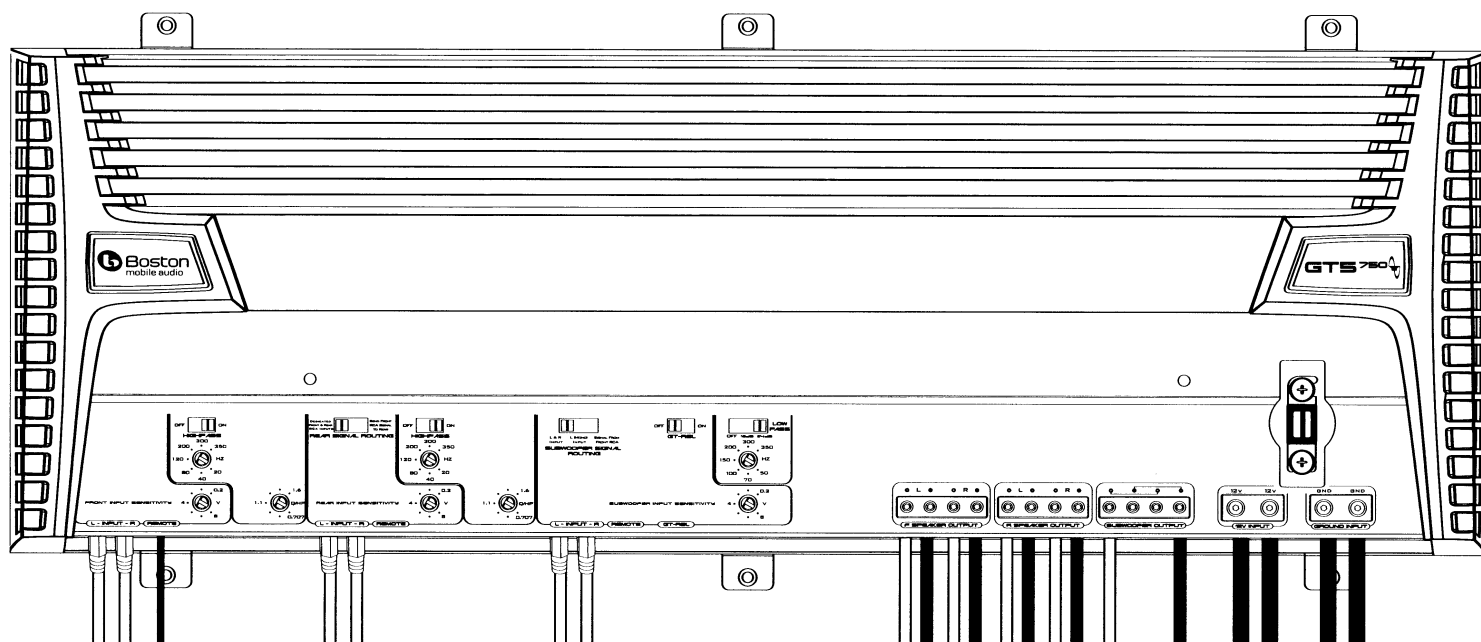
5) Head Unit

The head unit should have all controls such as bass, treble, balance, and fader set to the flat or centered position. The volume control should be at the minimum setting. If the head unit has any equalization or bass management features such as *boost*, they should be defeated at this time. Turn head unit on, and verify that the RED status LED (logo) is illuminated on the amplifier.

6) Volume

With the chosen musical track playing, turn the head unit volume control up until the maximum level of undistorted signal is heard from the speakers. (For most head units, this will be near the end of the volume control range.)

WARNING! A distorted signal from the head unit sent to the amplifier can cause loudspeaker failure at higher listening levels.



5-Channel Operation (Independent RCAs) Switch Configuration Diagram

Tuning The Amplifier - Front and Rear Speakers

7) Input Sensitivity Control

Starting with the front channels, slowly rotate the control clockwise (refer to the diagram on page 5) until maximum undistorted playing level is heard from the speakers. Listen closely for bottoming from the speakers. If detected, rotate the input sensitivity control counterclockwise until it is eliminated. Repeat for the rear channels.

8) Front and Rear Crossover Controls

To achieve higher undistorted playing levels from the both the front and rear speakers, the highpass crossover must be engaged. Starting with the front channels, rotate the crossover control fully clockwise (refer to the diagram on page 5). The highpass crossover point is now set at 350Hz. Rotate "Q-Tune™" Control fully counterclockwise (front and rear channels only). Move crossover switch to the right (ON) position.

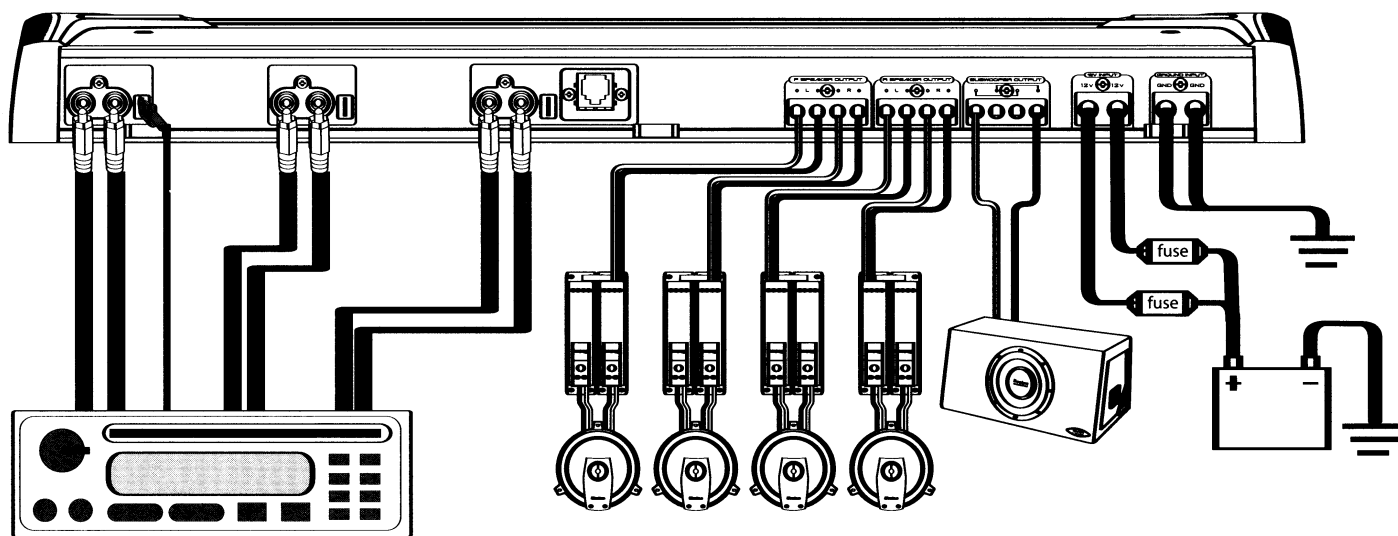
Slowly rotate the input sensitivity control clockwise until maximum undistorted playing level is heard from the speakers. Listen closely for bottoming from the speakers. If detected, rotate the input sensitivity control counterclockwise until it is eliminated. Slowly rotate the highpass crossover control counterclockwise while listening for bottoming. You are lowering the crossover point, which means that more bass signal is being sent to the speakers. If bottoming is detected, rotate the input sensitivity control counterclockwise until it is eliminated and/or rotate the Highpass crossover control clockwise to raise the crossover point. Repeat for the rear channels.

9) Front and Rear Q-Tune™ Control

Once the highpass crossover point has been determined, use the Q-Tune™ control (refer to the diagram on page 5) to increase the bass information centered around the crossover point.

Setting the Q-Tune™ control is done in conjunction with setting the levels on the input sensitivity and highpass crossover frequency controls. You may find while setting the Q-Tune™ that over-excursion may be detected in the front speakers; lowering the Q-Tune™ input sensitivity or raising the highpass crossover point will eliminate this. Minor adjustments to each setting are required to fine-tune the system.

Setting the Q-Tune™ is a subtle process. It is recommended that the Q-Tune™ setting be left in the 0.7 position and adjusted only after the input sensitivity and highpass crossover ranges are known. Small adjustments to the Q-Tune™ setting are all that are required to fine-tune the system.



5-Channel Operation (Independent RCAs) Wiring Configuration Diagram

Tuning The Amplifier - Subwoofer (s)

1) Subwoofer Signal Routing Switch

Move switch to left position (L+R Inputs) when used with Left and Right subwoofer RCA outputs. Move switch to middle position (L Mono Input) when used with single subwoofer RCA outputs. Move switch to right position (Signal from Front RCA) when subwoofer signal is to be derived from front and rear channels.

2) GT-RSL

The remote level control (GT-RSL) gives you independent level adjustment of the subwoofer's output level beyond the standard system volume control. Please refer to the RSL's manual for installation instruction. The GT-RSL is available separately, please consult your authorized Boston Acoustics dealer. If no GT-RSL is used, switch is set to "Off".

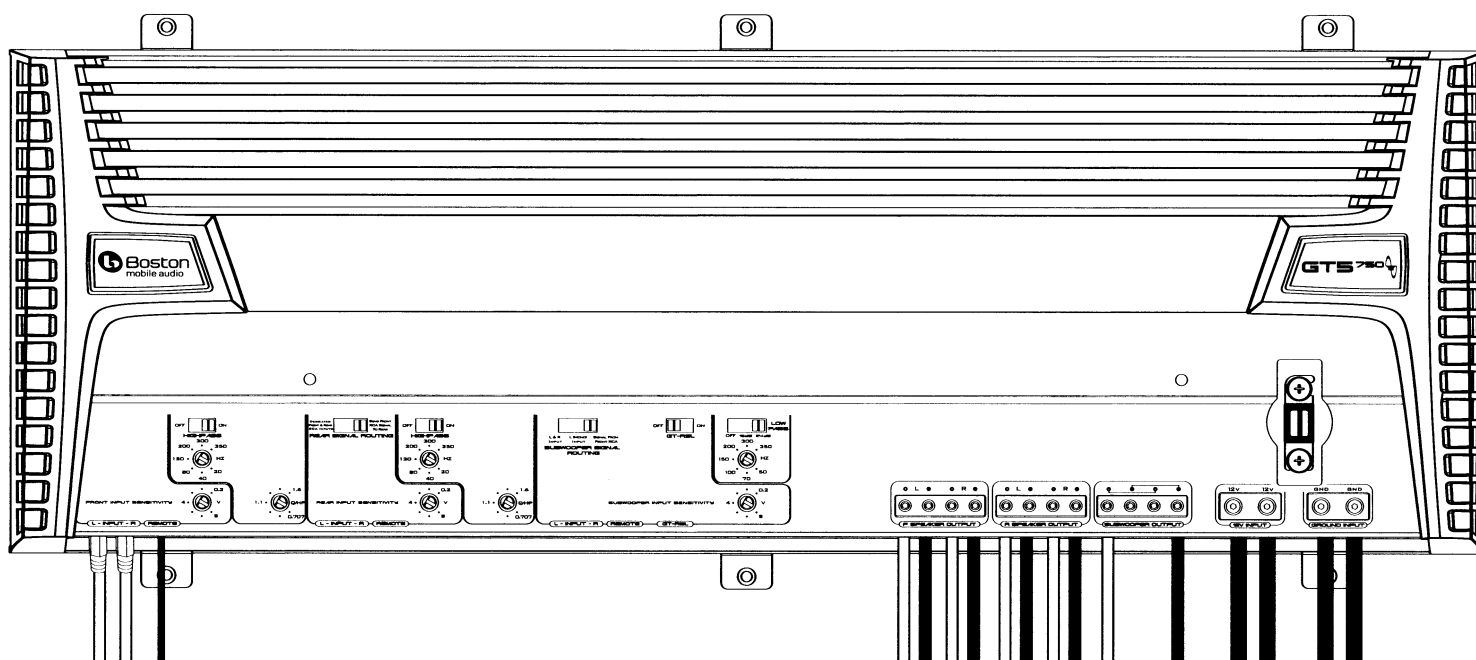
3) Head Unit

The head unit should have all controls such as bass, treble, balance, and fader set to the flat or centered position. The volume control should be at the minimum setting. If the head unit has any equalization or bass management features such as boost, they should be deactivated at this time. Turn head unit on, and verify that the RED status LED (logo) is illuminated on the amplifier.

4) Volume

With the chosen musical track playing, turn the head unit volume control up until the maximum level of undistorted signal is heard from the speakers. For most head units, this will be at the end of the volume control range.

WARNING! A distorted signal from the head unit sent to the amplifier can cause speaker failure at higher listening levels.



5-Channel Operation (Single RCA) Switch Configuration Diagram

Tuning The Amplifier - Subwoofer (s)

5) Subwoofer Input Sensitivity Control

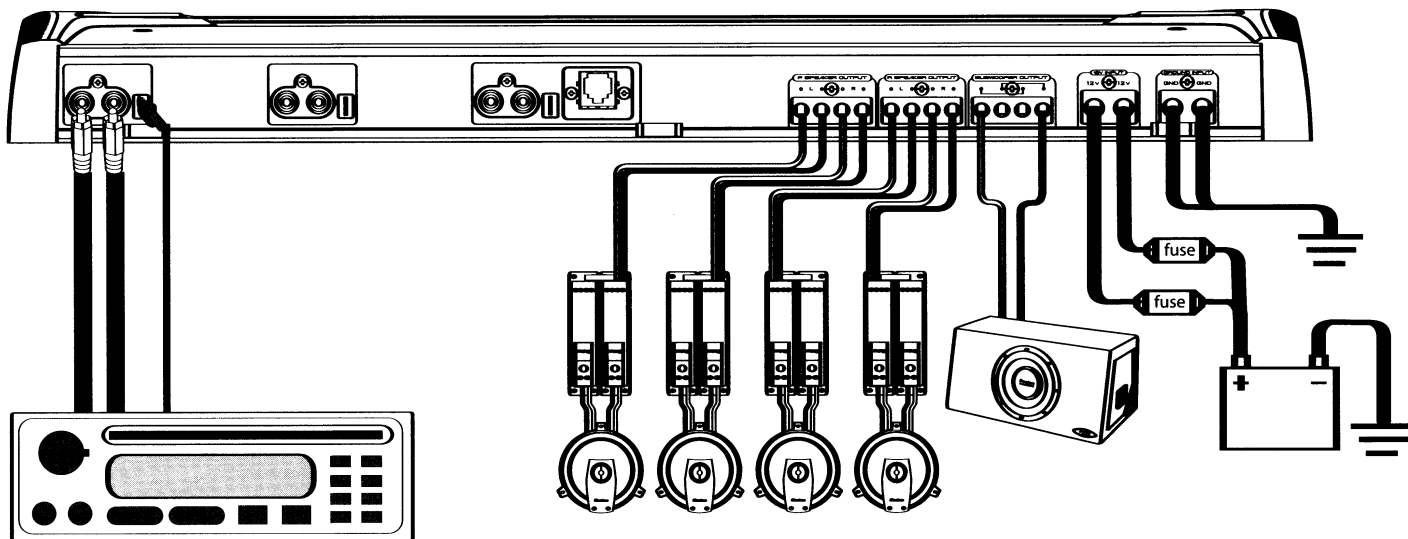
Turn control (refer to the diagram on page 5) all the way counterclockwise (minimum position). In this position, the amplifier will be less sensitive to the input signal from the head unit. Slowly rotate this control clockwise until maximum undistorted playing level is heard from the subwoofer(s). Listen closely for faults such as bottoming from the subwoofer(s). If fault is detected, rotate input sensitivity control counterclockwise until fault is eliminated. At this point, the maximum undistorted subwoofer playing level has been defined

8) Lowpass Crossover Control

Move the selector switch to either 12dB or 24dB (refer to the diagram on page 5). In this setting, lowpass signal is sent to the subwoofer outputs. Experiment with the crossover point settings while the subwoofer is active. A higher setting will increase the perceived output, and a lower setting will make the bass response more omnidirectional.

9) Phase

Subwoofer phase is relative to the front and rear loudspeakers. Correct electrical phase does not always mean correct acoustic phase. Swap positive (+) and negative (-) connections at the speaker outputs where the subwoofer is connected to the amplifier. It is beneficial to listen to the subwoofer connected in both phase conditions. The subwoofer should be left in the condition in which the strongest bass response is noted.



5-Channel Operation (Single RCA) Wiring Configuration Diagram

Amplifier Troubleshooting Guide

Status LEDs on Amplifier not Lit—Head Unit (Source) Turned “ON”

- Verify
- Remote turn-on wire from source to amplifier has proper voltage
 - Power (B+) connections at amplifier, terminal blocks, and battery are secure
 - Ground (GND) connections at amplifier and vehicle chassis are secure
 - Battery B+ fuse and amplifier fuse are OK
 - B+ at battery and B+ at amplifier have proper voltage

Status LEDs Lit, no Output from Speakers—Speakers in Normal Operating Condition

- Verify
- High-level cables from speaker(s) to amplifier are securely connected
 - RCA cables from amplifier to source are securely connected
 - Sensitivity adjustment on amplifier is correctly adjusted

Engine Noise from Speaker(s)

- Verify
- Turn source “OFF” and disconnect RCA cables at amplifier
 - If noise stops, check equipment and cables leading to amplifier
 - RCA cables are of good quality with no breakage to internal shields
 - RCA cables from source to amplifier are not run alongside power

Amplifier Output Distorted—Music not Recorded with Intentional Distortion

- Verify
- Source output to amplifier is not distorted
 - Amplifier input sensitivity is correctly adjusted

Amplifier Shutting Down, Red Blinking and Orange LEDs Lit—Amplifier in Thermal Protection Mode

- Verify
- Amplifier is mounted with adequate air circulation around vents
 - Amplifier does not have obstructions blocking back or side panel vents
 - Amplifier is not mounted under carpet
 - Speakers meet correct impedance for application (mono or stereo hookup)

Amplifier not Turning “ON”, Orange LED Lit—Amplifier not Connected to a Shorted Speaker

- Verify
- Speaker crossover is not defective
 - High-level cables from speaker to amplifier are not shorted

Amplifier not Turning And Both LED (s) Blinking—Speakers, Crossovers, and Cable OK

- Verify
- Internal fuse needs to be replaced
 - Replace fuse with fuse of same value

Amplifier not Turning “ON”, Orange LED Lit—Speakers, Crossovers, and Cable OK

- Amplifier requires service

If Service Seems Necessary

First, contact the dealer from whom you purchased the product, or contact us via e-mail at:

USA and Canada: support@bostona.com

Europe: support@bostona.com

Japan: ba_info@dm-holdings.com

Asia/Pacific countries: service@dm-singapore.com

We will promptly advise you of what action to take.

Boston Acoustics, Inc. 300 Jubilee Drive, Peabody, MA 01960 USA

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